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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/543,019	12/22/2005	Norishige Kawaguchi	501/43589/Case 102-PCT-US	3950
279 7590 11/16/2009 TREXLER, BUSHNELL, GIANGIORGI, BLACKSTONE & MARR, LTD. 105 WEST ADAMS STREET SUITE 3600 CHICAGO, IL 60603				
EXAMINER COHEN, JODIE F				
ART UNIT 1791		PAPER NUMBER		
MAIL DATE 11/16/2009		DELIVERY MODE PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/543,019

**Applicant(s)**

KAWAGUCHI ET AL.

**Examiner**

Jodi Cohen

**Art Unit**

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SI/ICE)  
Paper No(s)/Mail Date 07/16/2009
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The rejections of claims 1-4 under 35 U.S.C. 103(a) as being unpatentable over Yamamoto JP 11-106570 in view of Semen (US 6596198) are maintained and repeated below for convenience.
2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto JP 11-106570- as cited in the provided machine translation and further in view of Semen (US 6596198).

Regarding claims 1-4, Yamamoto discloses a method for manufacturing a polyolefin-polyamide resin composition [0006]-[0007], comprising melting and kneading, extruding, and drafted drawing or rolling fibers and further pelletizing the fibers with a fiber diameter of 1 micrometer or less by cooling [0017]-[0020]. The resin composition comprising a polyolefin such as polyethylene [0008], a polyamide that can have an amido group in the main chain and a melting point of 160-265 °C [0011], and a silane coupling agent [0013]-[0014]. Yamamoto also discloses adding organic peroxide but does not disclose adding a first antioxidant with a melting point of 70-170 °C, and a second antioxidant with a melting point of 180-300 °C.

Semen teaches manufacturing a polyolefin polymer comprising melting kneading and pelletizing by cooling a polymer. Additionally, a stabilizer additive is added to the polyolefin polymer in order to protect against polymer discoloration and thermooxidative degradation (Col 3; lines 12-20), wherein the additive comprises a first hindered phenol antioxidant with a melting point above 100 degrees Celsius and a secondary phosphate antioxidant. Semen lists a series of exemplary first antioxidants including melting points ranging from 94, 154, 128-132, 93-108, 76-79, 161-163, 110-125, 155-159, 50-55, 218-224, and 63 degrees Celsius (Col 4; line 10-Col 14-line 53). Thus only three of the exemplary first antioxidants fall outside of the range claimed in the present application of 70-170 degrees Celsius. The exemplary secondary antioxidants listed include melting points ranging from up to 200, 183-188, 200-205, 320-33, and 85-95 degrees Celsius, thus only two of the recommended secondary antioxidants fall outside of the melting point range claimed in the present application of 180-300 degrees Celsius. Thus it would have been obvious to one of ordinary skill in the art to have included the additive in the polyolefin polymer taught by Yamamoto because Semen teaches it protects the polymer against discoloration and thermooxidative degradation.

#### ***Response to Arguments***

4. Applicant's primary arguments are Semen teaches a polyolefin resin, not a polyolefin-polyamide resin and therefore it would not have been obvious to one of ordinary skill in the art to look to Semen in order to modify the reference of Yamamoto who teaches a polyolefin-polyamide resin.

5. In response to applicants' arguments, both Semen and Yamamoto teach forming plastic pellet compositions using extrusion techniques comprising polyolefin resins as well as antioxidants. Where both Yamamoto and Semen disclose pelletizing a polyolefin resin mixture it is considered that it would have been obvious to one of ordinary skill in the art of pelletizing resins using extrusion techniques to look Semen or Yamamoto. Thus one of ordinary skill in the art would be inclined to have added antioxidants as disclosed by Semen because Semen teaches these antioxidants to stabilize the resin mixture. Furthermore, where Semen discloses the antioxidants stabilize the polyolefin resin, it would have been obvious to one of ordinary skill in the art to choose antioxidants that provide the best stabilization.
6. Additionally, applicant's statements in the declaration of 03/24/2009 believe that the use of antioxidants within these temperature ranges produce new and unexpected results such as ability to knead and disburse the mixture, or preventing scorching. One of ordinary skill in the art knows viscosity is temperature dependent. It is considered completely within the realm of a skilled artisan to choose materials that have melting points so that the antioxidant and polyolefin-polyamide mixture is the optimal viscosity for kneading, rolling, or extruding without the temperature required damaging equipment used.

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jodi Cohen whose telephone number is 571-270-3966. The examiner can normally be reached on Monday-Friday 7:00am-5:00pm Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jodi F. Cohen/  
Examiner, Art Unit 1791

/Eric Hug/  
Primary Examiner, Art Unit 1791